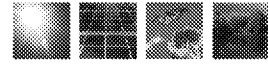


Water Quality Standards Regulation (9 VAC 25-260) Rulemaking: Bacteria, Ammonia, Cadmium, Human Health Criteria

**Department of Environmental Quality
Regulatory Advisory Panel Meeting #2
May 9, 2016
DEQ – Piedmont Regional Office**



Agenda:

- **Introductions**
- **Ammonia Criteria**
 - **Issues & Implementation Options**
 - **Discussion**
- **Cadmium**
 - **Discussion**
- **Wrap-Up**



Ammonia Criteria

| Issues Raised in Comments | Options to Address |
|---|---|
| Capital and operating costs for compliance | <ul style="list-style-type: none">• State financial assistance |
| Relationship to other current or future nutrient criteria; coordinate multiple program issues | <ul style="list-style-type: none">• Phased retrofits• Integrate design to also cover freshwater nutrient criteria or revised Ches Bay waste load allocations |
| Bring VPDES compliance schedule requirements in line with EPA's regulations | <ul style="list-style-type: none">• Extended compliance schedules• Variance(s) |

Ammonia Implementation Options

- Compliance schedules
 - Currently, within the permit duration (5 years)
 - Federal NPDES Regs doesn't specify other than 'soon as possible'
- Variances
 - likely based on "*widespread social and economic impact*"

Options for Compliance Schedule Modifications

- If consensus can be reached, a secondary action could propose amending the VPDES Permit Regulation to delete current *"length of permit"* restriction
 - Pros?
 - Cons?
- If preference is to amend WQ Standards Regulation, what language to propose
 - Specific to ammonia; controls in lieu of VPDES Reg?
 - Include factors to consider when setting schedules?



Other Relief that May Apply

- Recalculation of criteria – mussels absent
- Calculation of site-specific discharge limits (pH and temperature dependent)
- Others??

EPA's Updated Water Quality Criteria for Cadmium

| Freshwater Criterion | Acute | Chronic |
|----------------------|----------------------|----------------------|
| | ug/L at hardness 100 | ug/L at hardness 100 |
| Virginia (1984) | 3.9 | 1.1 |
| EPA (2001) | 2.0 | 0.25 |
| EPA (2016) | 1.8 | 0.72 |

Updated Criteria for Cadmium: With and without extra protection for rainbow trout

| Criterion | Acute | Chronic |
|---|----------------------|--------------------------------|
| | ug/L at hardness 100 | ug/L at hardness 100 |
| EPA (2016) ; criterion lowered to protect rainbow trout | 1.8 | 0.25 |
| EPA (2016) ; criterion NOT lowered to protect rainbow trout | 2.7 | 0.25 (no change to chronic) |

Using standard, "normal" methods of calculating an acute criterion, the updated acute criterion would be 2.7 ug/L at a hardness of 100. The rainbow trout EPA recommends lowering the acute criterion to 1.8 ug/L to protect the more sensitive rainbow trout because of its recreational importance

EPA's Updated Water Quality Criteria for Cadmium (Estuarine)

| Estuarine Criterion | Acute (ug/L) | Chronic (ug/L) |
|---------------------|--------------|----------------|
| Virginia | 40 | 8.8 |
| EPA 2016 | 33 | 7.9 |



**June Meeting:
Focus on Bacteria Criteria
and
Human Health Criteria Updates**